

1806Z 09 MAR 66

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25X1A DIRECTOR

[REDACTED]

IMMEDIATE

TOR: 1848Z 09 MAR 66

IN 92470

25X1A

25X1A IMMEDIATE

[REDACTED]

25X1A IDEALIST

[REDACTED]

25X1A KWCARD FOR

[REDACTED]

SUBJ: INVESTIGATION OFFICERS REPORT - ART 342

25X1A 1. FOLLOWING IS PROVISIONAL CONCLUSION OF THE INVESTIGATION
OFFICER [REDACTED] INTO ART 342 ACCIDENT AND MAY BE AMENDED
AFTER INTENSIVE EXAMINATION OF THE LEFT WING WHICH SHOULD BE
RECOVERED LATE 9 MARCH OR EARLY 10 MARCH.

2. THE LEFT WING FAILED AT THE ROOT JUST OUTBOARD OF THE FIRST
WING RIB. THE UNDER WING SKIN FAILED AT THE FINGER PLATES LEAVING
THE LOWER WING ATTACHMENT FITTINGS AND BOLTS INTACT WITH THE
FUSELAGE. THE UPPER WING ATTACHMENTS WERE ALL SHEARED OFF OUTBOARD
OF THE ATTACHMENT BOLTS EXCEPT THE FIRST TWO WHICH WERE FOUND WITH
THE LEFT WING, THE BOLTS HAVING FAILED ON THESE.

3. THE REMAINDER OF THE AIRCRAFT THEN PITCHED NOSE UP,
IMPOSING EXCESSIVE "G" ON THE STRUCTURE. THIS CAUSED THE LEFT
ENGINE BALL BAT SUPPORT STRUCTURE TO FAIL ALLOWING THE ENGINE TO
BREAK THROUGH THE LOWER FUSELAGE BULKHEADS. THE RIGHT ENGINE BALL

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BAT SLIPPED OUT OF ITS BEARINGS AND THE REAR ENGINE SUPPORTING BOLT FAILED UNDER TENSION. THUS THE ENGINE CAME COMPLETELY FREE OF THE FUSELAGE.

4. THE RIGHT WING THEN BROKE AWAY WITH A PORTION OF THE FUSELAGE ATTACHED TO IT. THE CONTERPART OF THE FUSELAGE WAS NOW FREE.

5. THE NOSE SECTION FORWARD OF THE WING LEADING EDGE AND THE TAIL SECTION AFT OF THE TRAILING EDGE CAME APART AS COMPLETE SECTIONS EXCEPT FOR THE LEFT HORIZONTAL STABILIZER WHICH WAS EITHER BROKEN OFF DUE TO EXCESSIVE AIR LOADING OR WAS STRUCK BY THE LEFT WING AS IT CAME OFF. THIS IS THE ONLY MAJOR PROTION NOT YET LOCATED.

6. THE TYPE OF MANEUVER EXECUTED BY THE PILOT JUST PRIOR TO THE ACCIDENT ALTHOUGH WITHIN THE LIMITATIONS STATED IN THE HANDBOOK WAS IN ALL PROBABILITY THE CAUSE OF THE STRUCTURAL FAILURE OF THE LEFT WING. WHEN A ROLLING MOMENT IS SUPERIMPOSED ON THE WING WHILE IT IS SUBJECTED TO AN APPLIED "G" FORCE THEN THE WING SUFFERS A TWISTING MOMENT AS WELL AS A BENDING MOMENT. THIS HAS CAUSED FAILURES IN THE PAST SEVERAL TYPES OF AIRCRAFT AND THE "G" LOADING THAT MAY BE APPLIED IS SEVERELY REDUCED WHENEVER IT IS COMBINED WITH A ROLLING MANEUVER.

7. THE FUEL PLACEMENT WAS ADVERSELY LOCATED EVEN BEFORE THE TIME OF THE ACCIDENT. WHICH COULD ONLY HAVE CONTRIBUTED TO THE UNFAVORABLE WING LOADING. THIS FUEL PLACEMENT IN THE AUXILLARY TANKS WAS REQUIRED FOR THE TYPE OF OPERATION THE PILOT WAS ENGAGED IN AND WAS IN ACCORDANCE WITH THE HANDBOOK.

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8. IT IS CONSIDERED THAT THE PILOT DID NOT EXCEED THE LIMITATIONS OF THE AIRCRAFT AS INDICATED IN THE FLIGHT STRENGTH DIAGRAM. THESE DIAGRAMS HOWEVER, DO NOT TAKE INTO ACCOUNT ANYTHING EXCEPT A STRAIGHTFORWARD POSITIVELY APPLIED "G" FORCE AT VARIOUS AIRCRAFT CONFIGURATIONS AND ALL UP WEIGHTS.

9. THE PILOTS RIGHT FOOT WAS RIPPED IN SUCH A MANNER THAT LEADS US TO SUSPECT THIS DAMAGE TO HAVE BEEN CAUSED BY THE CANOPY LACKING LEVER ON EJECTION.

10. RECOMMENDATIONS: A. A RESTRICTION BE PLACED ON ROLLING MANEUVERS WHILE POSITIVE "G" IS BEING APPLIED TO THE AIRCRAFT, PARTICULARLY AT HIGHER SPEEDS AS DETERMINED BY LAC.

B. THE FUEL PLACEMENT NOT TO BE SUCH THAT A CONDITION IS ARRIVED AT WHEREBY THE AUXILIARY TANKS ARE FULL AND THE MAIN TANKS EMPTY.

C. THAT LAC CONDUCT THE SERIES OF INSPECTIONS THEY DEEM ADVISABLE.

D. THE RIGHT HAND CANOPY LOCKING LEVER BE RELOCATED SO THAT WHEN THE CANOPY IS JETTISONED THE LEVER DOES NOT ROTATE TO THE DOWNWARD POSITION THUS CAUSING A HAZARD TO SAFE EJECTION.

E. A MODIFICATION BE MADE TO THE LAP BELT AND AUTOMATIC DISCONNECT SYSTEM SUCH THAT THE PILOTS CLOTHING IS NOT SUBJECTED TO BURN DAMAGE.

11. REQUEST HQTRS MAKE FURTHER DISTRIBUTION OF THIS REPORT AS DESIRED.

END OF MESSAGE